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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/894,717	06/28/2001	Dean Tran	12-1027	5142

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EXAMINER

FLORES RUIZ, DELMA R

ART UNIT

PAPER NUMBER

2828

DATE MAILED: 12/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/894,717

Applicant(s)

TRAN ET AL.

Examiner

Delma R. Flores Ruiz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 June 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 14-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3. 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1 - 13, drawn to semiconductor with integrated monitoring, classified in class 372, subclass 50.
- II. Claims 14 – 22, drawn to a process for forming a semiconductor device, classified in class 438, subclass 2<sup>+</sup>.

The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as apparatus and product made. The inventions in this relationship are distinct if either or both of the following can be shown: (1) that the apparatus as claimed is not an obvious apparatus for making the product and the apparatus can be used for making a different product or (2) that the product as claimed can be made by another and materially different apparatus (MPEP § 806.05(g)). In this case that the apparatus as claimed is not an obvious apparatus for making the product and the apparatus can be used for making a different product.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group I, restriction for examination purposes as indicated is proper.

During a telephone conversation with Noel F. Heal on November 21, 2002 a provisional election was made without traverse to prosecute the invention of semiconductor with integrated monitoring, claims 1 - 13. Affirmation of this election must be made by applicant in replying to this Office action. Claims 14 – 22 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 – 13 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: There is no structural or means recited in the claim, for performing the apparatus, example laser structure (mirror, active layer, cladding layer, etc.,. One of ordinary skill in the art will not

understand the apparatus since the components of the apparatus are not clearly stated at the claim as a complete structure.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 2, 6 – 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Aronson et al (6,483,862).

**Regarding claims 1 – 2, 6** Aronson discloses a semiconductor with integrated monitoring comprising: a first semiconductor formed on a predetermined substrate (see Fig. 2A, Character 102) a passivation layer (see Fig. 2A, Character 115, It is well known in the art that a passivation layer and an insulation layer are both the same thing, and that hence they perform the same function.) formed on top of said first semiconductor device (see Fig. 2A); a monitoring device (see Fig. 2A, Character 110) formed on top of said passivation layer (see Fig. 2A). The first semiconductor device is an active device (see Fig. 2A, Character 104). The active device is an amplifier (said limitation only recites facts and features that are well known and expected, the same features that essentially result from the use or application of a active device is an amplifier , and therefore said limitations are said to be inherently disclosed in the teachings of Aronson), (Abstract, Column 1, lines 15 – 67, Column 3, lines 8 – 28, Column 5, lines 1 – 67, Column 6, lines 1 – 19, 63 – 67, Column 7, lines 1 – 57, Column 8, lines 1 – 24, Column 10, lines 55 – 67, Column 11, lines 1 – 67, Column 12, lines 1 – 55).

**Regarding claims 7, 8 and 9** Aronson discloses a first semiconductor device is a light-emitting device, the light emitting device is a laser and the laser is a VCSEL, (see Figs. 1A, 2A, 3, 4A, and 5, Abstract, Column 1, lines 15 – 21, Column 5, lines 1 – 22).

**Regarding claims 10 – 11** Aronson discloses a monitoring device is a light-transmitting device and light receiving device (Column 10, lines 5 – 22, Column 12, lines 44 – 55).

**Regarding claims 12 – 13** Aronson discloses a light transmitting device is a photodiode and the transmitting device is a photodetector (see Fig. 4A – C , Column 4, lines 13 – 30, Column 10, lines 5 – 22, Column 11, lines 66 – 67, Column 12, lines 1 – 2, 44 – 55).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 – 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aronson et al (6,483,862) in view of Jewel (5,877,519).

**Regarding claim 3 – 5** Aronson discloses a semiconductor with integrated monitoring comprising: a first semiconductor formed on a predetermined substrate (see

Fig. 2A, Character 102) a passivation layer (see Fig. 2A, Character 115, It is well known in the art that a passivation layer and an insulation layer are both the same thing, and that hence they perform the same function.) formed on top of said first semiconductor device (see Fig. 2A); a monitoring device (see Fig. 2A, Character 110) formed on top of said passivation layer (see Fig. 2A). The first semiconductor device is an active device (see Fig. 2A, Character 104). Aronson discloses the claimed invention except for the semiconductor formed on a GaAs or InP or GaN substrate. It would have been obvious at the time of applicant's invention, to combine Jewel of teaching a the semiconductor formed on a GaAs or InP or GaN substrate with the semiconductor because it would have been obvious to one having ordinary skill in the art at the time the invention was made to the semiconductor formed on a GaAs or InP or GaN substrate since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Delma R. Flores Ruiz whose telephone number is (703) 308-6238. The examiner can normally be reached on M - F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3431.



Delma R. Flores Ruiz  
Examiner  
Art Unit 2828



Paul Ip  
Supervisor Patent Examiner  
Art Unit 2828

DRFR/PI  
November 22, 2002